

1. Lea el texto y marque las palabras que desconoce. ¿Qué tipo de palabras son?
2. Encuentre cinco ejemplos de los diferentes tipos de palabras → Adjetivos, sustantivos, verbos y adverbios.

https://www.youtube.com/watch?v=t_i0E_zw6U&ab_channel=MechaMind (10:19 – 2:52)

Mechatronics engineering is an interdisciplinary field that brings together mechanical engineering, electronics computer science and control engineering. Think of it as the ultimate fusion of hardware and software where machines meet brains. In simple terms, it's all about designing and creating intelligence systems that can do more than just one thing, from robots that can assemble cars to smart home devices that learn your habits. Mechatronics is behind it all. Now let's break down the core components of mechatronics.

Mechanical Systems

This includes everything from gears and motors to sensors and actuators. It's the physical backbone that makes movement possible.

Electronics

This is where circuits and microcontrollers come into play powering the mechanical components and controlling their actions.

Computer Science

The brain of the operation programming and algorithms are used to process data and make decisions.

Control Systems

These ensure that everything works together smoothly using feedback loops to adjust the system in real time. By combining these elements, mechatronic engineers can create systems that are both complex and highly functional. Mechatronics is everywhere even if you don't realize it.

Applications

Here are some of the most exciting applications:

Robotics: from industrial robots that build cars to surgical robots that assist doctors. Mechatronics is the driving force behind modern robotics.

Automotive Systems: cars today are packed with mechatronic systems, think of anti-lock braking systems, ABS, automatic gearboxes and even autonomous vehicles.

Aerospace: in aircraft mechatronics is crucial for flight control systems, landing gear and more.

Consumer electronics: your smartphone, smartwatch and even your coffee machine rely on mechatronics to function seamlessly.

Medical devices: from prosthetics to advanced imaging systems, mechatronics plays a crucial role in healthcare.

The possibilities are endless and as technology advances we're only going to see more innovation in these areas.

3. Lea los enunciados y marque verdadero o falso.

- a. Mechatronics is the combination of mechanical systems, electronics, computer science, and control engineering. _____
- b. Control systems do not use feedback loops to adjust a system in real time. _____
- c. Mechatronics is only used in industrial robots and has no applications in medicine. _____
- d. Anti-lock braking systems (ABS) in cars are an example of mechatronics in the automotive industry. _____
- e. Smart home devices that learn user habits are an application of mechatronics. _____

4. Para que los textos tengan fluidez, utilizamos ciertos mecanismos cohesivos como los conectores; ¿puede identificarlos y mencionar su propósito?

5. Lea las preguntas y responda en base al texto leído.

a. **What does mechatronics engineering combine? ¿Qué combina la ingeniería mecatrónica?**

b. **What is the role of computer science in mechatronics? ¿Cuál es el papel de la informática en la mecatrónica?**

c. **How do control systems help in mechatronics? ¿Cómo ayudan los sistemas de control en la mecatrónica?**

d. **Give two examples of mechatronics applications. Menciona dos aplicaciones de la mecatrónica.**

e. **Why is mechatronics important in modern cars? ¿Por qué es importante la mecatrónica en los autos modernos?**
